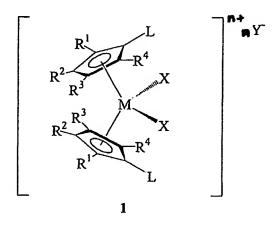


10/520477

DT15 Rec'd PCT/PTO 0 4 JAN 2005

CLAIMS

1. A metallocene compound of formula 1 for use as a medicament in the treatment of cancer.



5

15

20

wherein R¹, R², R³ and R⁴ represent a combination of H, alkyl, aryl or trimethylsilyl;

L represents side chain substituents, at least one of which contains a group which enables the compound to become water-solubilised;

10 X is halo, alkoxy, acetate or H_2O ;

Y is a counter-ion;

M is a metal; and

n = 1 or 2,

wherein n = 1 when one of the side chain substituents L contains a group which enables the compound to become water-solubilised, and n = 2 when both of the side chain substituents L contain groups which enables the compound to become water-solubilised.

- 2. A metallocene compound as claimed in claim 1 wherein the metal M is titanium, vanadium, niobium or molybdenum.
- 3. A metallocene compound as claimed in claim 1 or 2 wherein the counter-ion Y is a halide, acetate, tetrafluoroborate or hexafluorophosphate ion.







- 4. A metallocene compound as claimed in claim 1, 2 or 3 which is in the form of the dichloride salt.
- 5. A metallocene compound as claimed in any one of claims 1 to 4 which is in the form of a solvate or a pro-drug.
 - A metallocene compound as claimed in any preceding claim wherein both groups L are functionalised to enable the compound to become watersolubilised.

10

- A metallocene compound as claimed in any preceding claim wherein only one group L is functionalised to enable the compound to become watersolubilised.
- 15 8. A metallocene compound as claimed in any preceding claim wherein L comprises a group which carries a pendant Lewis base.
 - A metallocene compound as claimed in claim 8 wherein the Lewis base is provided by an amino group.

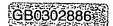
20

- A metallocene compound as claimed in claim 9 wherein the amino group is a secondary amino group.
- 11. A metallocene compound as claimed in claim 10 wherein the secondary
 25 amino group comprises a -(CH₂)₂N(CH₂)₅ group.
 - A metallocene compound as claimed in claim 9 wherein the group L has the formula

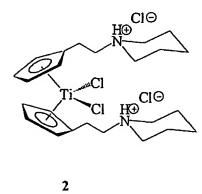
 $-(CH_2)_nZ$

30

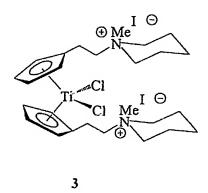
wherein n is an integer from 1 to 20 and Z comprises an amino group.



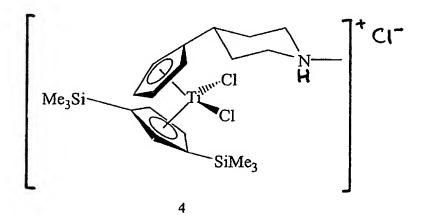
13. A metallocene compound as claimed in claim 1 which has the formula 2:



14. A metallocene compound as claimed in claim 1 which has the formula 3:



15. A metallocene compound as claimed in claim 1 which has the formula 4:

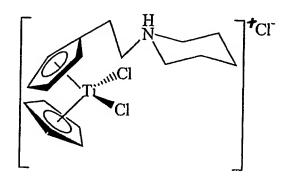


10

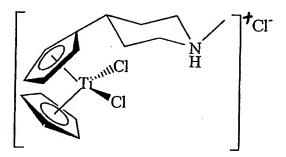
5



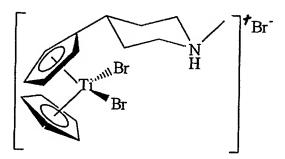
16. A metallocene compound as claimed in claim 1 which has the formula 5:



5 17. A metallocene compound as claimed in claim 1 which has the formula 6:



18. A metallocene compound as claimed in claim 1 which has the formula 7:





5

10



- 19. A metallocene compound as claimed in any one of claims 1 to 18 wherein both groups L comprise a quaternary tetraalkylammonium group.
- 20. A metallocene compound as claimed in any one of claims 1 to 18 wherein only one group L comprises quaternary tetraalkylammonium group.
 - 21. A metallocene compound as claimed in any one of claims 1 to 20 for administration to a patient orally, parenterally, topically, nasally or via slow releasing microcarriers.

22. A metallocene compound as claimed in any one of claims 1 to 21 wherein excipients comprise saline, sterile water, creams, ointments, solutions, gels, pastes, emulsions, lotions, oils, solid carriers or aerosols.

- 15 23. A metallocene compound as claimed in any one of claims 1 to 22 for administration alone or in combination with at least one other compound.
 - 24. A metallocene compound as claimed in claim 23 wherein said at least one other compound has biological activity.

25

20